Name:

p1106: Solve by factoring (v17)

1. Solve the equation

$$x^2 - x - 56 = 0$$

$$(x-8)(x+7) = 0$$
$$x = -7$$
$$x = 8$$

2. Solve the equation

$$x^2 - 5x - 6 = 0$$

$$(x+1)(x-6) = 0$$
$$x = 6$$
$$x = -1$$

3. Solve the equation

$$4x^2 + 19x + 15 \;=\; 3x^2 + 8x - 3$$

$$x^2 + 11x + 18 = 0$$
$$(x+9)(x+2) = 0$$
$$x = -2$$
$$x = -9$$

4. Solve the equation

$$4x^2 - 7x + 47 \;=\; 3x^2 + 6x + 7$$

$$x^2 - 13x + 40 = 0$$
$$(x-8)(x-5) = 0$$
$$x = 5$$
$$x = 8$$

5. Solve the equation

$$3x^2 - 4x - 16 \;=\; 2x^2 - 4x + 9$$

$$x^2 - 25 = 0$$
$$(x+5)(x-5) = 0$$
$$x = 5$$
$$x = -5$$

6. Solve the equation

$$11x^2 + 52x - 15 = 0$$

$$(11x - 3)(x + 5) = 0$$
$$x = -5$$
$$x = \frac{3}{11}$$

7. Solve the equation

$$7x^2 - 32x - 15 = 0$$

$$(7x + 3)(x - 5) = 0$$
$$x = 5$$
$$x = \frac{-3}{7}$$

8. Solve the equation

$$11x^2 + 34x - 13 \;=\; 6x^2 - 5x - 5$$

$$5x^2 + 39x - 8 = 0$$
$$(5x - 1)(x + 8) = 0$$
$$x = -8$$
$$x = \frac{1}{5}$$

9. Solve the equation

$$5x^2 - 12x + 15 \;=\; 3x^2 + 3x + 8$$

$$2x^2 - 15x + 7 = 0$$
$$(2x - 1)(x - 7) = 0$$
$$x = 7$$
$$x = \frac{1}{2}$$

10. Solve the equation

$$6x^2 + 8x - 57 \;=\; 4x^2 + 3x + 6$$

$$2x^2 + 5x - 63 = 0$$
$$(2x - 9)(x + 7) = 0$$
$$x = -7$$
$$x = \frac{9}{2}$$